

EXECUTIVE SUMMARY

The 1990 Department of Labor Survey of Workplace Literacy assessed the workplace literacy levels of eligible applicants for JTPA training and of jobseekers in the Employment Service/Unemployment Insurance programs. Using the survey data, which included workplace-literacy proficiency scores and data concerning various socio-economic and personal characteristics of the respondents, this study analyzed the relationship between the workplace literacy and labor market performance of the unemployed workers in these programs on one hand and the determinants of workplace literacy on the other.

The central focus of the DOL survey was workplace literacy, which emphasizes the use of literacy skills in actual workplaces. Thus, the relevant skills are the individual's critical thinking and information processing abilities which subsume skills in the three R's.

Three facets of workplace literacy were measured by the proficiency scores obtained from the assessment test in the survey -- prose comprehension, document literacy, and quantitative literacy. (See Appendix Tables A-1-3(a) through (c) for a description of these literacy scales.) Prose comprehension is defined as "the knowledge and skills associated with understanding and using information from texts such as editorials, newspaper articles, stories, poems, and the like." Document literacy is defined as "the knowledge and skills associated with locating and using information in tables, charts, graphs, maps, indexes, and so forth." Quantitative literacy is defined as "the knowledge and skills associated with performing different arithmetic operations, either alone or sequentially, using information embedded in both prose and document materials." (See Irwin Kirsch, et al., Beyond the School Doors.)

The purpose of the present study was twofold -- to evaluate the effect of workplace literacy on the labor-market performance of the unemployed workers in the study populations and to identify the determinants of workplace literacy. The analytical findings led to a number of human resource policy implications, which are highlighted as follows:

1. Workplace literacy plays a critical role in determining the labor market experience of the workers in these DOL client populations. The present study has found that workplace literacy is significantly correlated with hourly wages, within either the JTPA or ES/UI population. It has also found that workplace literacy is highly correlated with weeks worked in a one-year period in the JTPA population and among ES/UI jobseekers who worked less than 52 weeks in a year.
2. It is reasonable to extend these findings to the general population of workers to say that workplace literacy has a positive impact on their hourly wages. Such effect may be an increase in worker productivity or a relative advantage in the labor market of workers with enhanced levels of workplace literacy. Because of the downward bias in the estimated effects of workplace literacy in this study, it is very likely that such an impact is actually greater than the present study indicates.

3. There is an urgent need for workplace-literacy training to be made an integral part of job training. This is attested to by the large proportion of the unemployed workers in the study populations at literacy levels inadequate to perform at the workplace and, moreover, by a substantial amount of high school graduates (and of those with a GED) at these low levels of literacy. The need for improved workplace-literacy levels of the workers is real when rapid changes in technology and the market make it imperative for workers to be equipped with adjustability and with the creativity made possible by their critical thinking capabilities. Such training in the creation of “transportable skills” is an investment in intangible social overhead. In that sense, workplace-literacy training is a proper arena of government activities.
4. As a whole, workplace literacy did not have much impact on the employment experience (measured by the number of weeks worked in a one-year period) of **ES/UI** jobseekers. However, it did on those who worked less than a full 52 weeks. Given that 30 percent of **ES/UI** jobseekers had worked a full 52 weeks in a year, this finding suggests a need for a targeted workplace-literacy training policy for those **ES/UI** jobseekers who are characterized by irregular past employment. This is sensible because the **ES/UI** population is very heterogeneous. A substantial part of **ES/UI** jobseekers are **regularly**-employed workers on a temporary lay-off, and their needs are very different from another segment of **ES/UI** program participants who, when they work, are employed irregularly either voluntarily or involuntarily and are comprised, to a large extent, of contingent workers, disadvantaged workers, new entrants, and re-entrants.
5. The white-black or white-Hispanic gap in economic well-being may be reduced considerably by workplace literacy improvements among minority workers. This is supported by the large ethnic differences in wages and employment being accounted for, to a large degree, by the effects of workplace literacy. Nevertheless, it is important to note that the remaining gaps are large, indicating other sources of wage and employment differences.
6. A substantial part of the differences in wages and employment due to differences in occupation is explained by differences in the literacy content of jobs. This indicates that the greater the complexity of specific job skills, the higher the general skills (workplace literacy) associated with it. Thus, job training at all levels needs to be accompanied by a corresponding investment in workplace-literacy skills.
7. The present analysis found that, independent of the effects of workplace literacy, there is a strong relationship between attainment of a high school diploma (or **GED**) and labor market achievement. This seems to indicate that, aside from the substance of learning as represented by literacy proficiency score, there is an economic return to the experience of going through schooling (i.e. the “process” of learning). In other words, a diploma or GED makes a difference in finding jobs and attaining high wages reflecting the so-called credentialling effect or the individual’s motivation and tenacity.
8. Given that workplace literacy is an important determinant of the labor market achievement, hence economic well-being, of the unemployed workers in the two DOL client populations, an analysis of the determinants of workplace literacy gives us some

clues as to what can be done to improve the workplace-literacy levels of unemployed workers. Among them, this study has found:

(a) Schooling is by far the most important determinant of workplace literacy, which is not surprising since basic skill in the three R's is a fundamental tool in acquiring and polishing the critical thinking and information processing abilities. This outcome is a reminder that skills in basic reading, writing, and arithmetic are the foundation on which to build workplace-literacy skills.

(b) Literacy-related activities at home and work have a positive impact on literacy proficiency. For example, the use of literacy skills in reading newspapers and in reading and writing memos and articles are closely related to literacy proficiency. While causality runs in both directions, this result points to the importance of sharpening one's workplace-literacy skills through use. Also, it seems to imply that contextual literacy training in conjunction with specific job training, as is done in some high school and youth apprenticeship programs, is an efficient method.

(c) The significant positive relationship between the awareness of one's level of literacy and literacy proficiency, found in the present analysis, lends some credence to the notion that knowing what one knows (or does not know) helps one to learn efficiently. This result points to the usefulness of periodic literacy assessment of job trainees to enhance the proper grasp of their literacy skills. The newly-created DOL Workplace Literacy Test (**WLT**) will be a useful tool for this purpose.

(d) Parents' educational level and family involvement in literacy-related activities, such as having reading materials at home, are an important contributing factor in developing literacy proficiency. The implication is that workplace literacy is the product of a **long-range** conscious effort involving both school and family. For job training programs, this finding points to the need to emulate environments conducive to learning.

9. Workplace-literacy learning gains should be included in the performance standards by which to evaluate individual job training programs. This is a logical follow-up to the recommendation of making workplace-literacy training an integral component of job training. Integration of workplace training in job training programs should be accompanied by periodic workplace literacy assessment of individual program participants. The DOL WLT instrument is a suitable tool for these purposes.
10. Individual assessment is valuable also in promoting efficiency in job matching if it is coupled with assessment of individual job (or job cluster) requirements in terms of the three literacy scales -- (prose comprehension, document literacy, and quantitative literacy) so that a job trainee can readily determine her or his readiness for a desired job in terms of workplace literacy. For this reason, an undertaking of job analysis according to the same scales as those in the DOL WLT instrument is recommended.
11. Job training with a workplace literacy component as an integral part should be viewed in a global perspective so that, by enhancing workers' productivity, it will create or bring back jobs while contributing to this country's international competitiveness.